

$$\text{Percent drift} = \frac{\text{Absolute difference}}{\text{Span value}} \times 100$$

TABLE 20-1—INTERFERENCE TEST GAS CONCENTRATION

CO	500±50 ppm	CO ₂	10±1 percent.
SO ₂	200±20 ppm	O ₂	20.9±1 percent.

FIGURE 20-4—INTERFERENCE RESPONSE

Date of test _____
 Analyzer type _____
 Serial No. _____

Test gas type	Concentration, ppm	Analyzer output response	% of span

$$\% \text{ of span} = \frac{\text{Analyzer output response}}{\text{Instrument span}} \times 100$$

Conduct an interference response test of each analyzer prior to its initial use in the field. Thereafter, recheck the measurement system if changes are made in the instrumentation that could alter the interference response, e.g., changes in the type of gas detector.

In lieu of conducting the interference response test, instrument vendor data, which demonstrate that for the test gases of Table 20-1 the interference performance specification is not exceeded, are acceptable.

5.5 Response Time. To determine response time, first introduce zero gas into the system at the calibration valve until all readings are stable; then, switch to monitor the stack effluent until a stable reading can be obtained. Record the upscale response time. Next, introduce high-level calibration gas into the system. Once the system has stabilized at the high-level concentration, switch to monitor the stack effluent and wait until a stable value is reached. Record the downscale response time. Repeat the procedure three times. A stable value is equivalent to a change of less than 1 percent of span value for 30 seconds or less than 5 percent of the measured average concentration

for 2 minutes. Record the response time data on a form similar to Figure 20-5, the readings of the upscale or downscale response time, and report the greater time as the "response time" for the analyzer. Conduct a response time test prior to the initial field use of the measurement system, and repeat if changes are made in the measurement system.

FIGURE 20-5—RESPONSE TIME

Date of test _____
 Analyzer type _____
 S/N _____
 Span gas concentration: _____ ppm.
 Analyzer span setting: _____ ppm.
 Upscale:
 1 _____ seconds.
 2 _____ seconds.
 3 _____ seconds.
 Average upscale response _____ seconds.
 Downscale:
 1 _____ seconds.
 2 _____ seconds.
 3 _____ seconds.
 Average downscale response _____ seconds.
 System response time =
 slower average time =
 _____ seconds.

5.6 NO₂ to NO Conversion Efficiency.

5.6.1 Add gas from the mid-level NO in N₂ calibration gas cylinder to a clean, evacuated, leak-tight Tedlar bag. Dilute this gas approximately 1:1 with 20.9 percent O₂, purified air. Immediately attach the bag outlet to the calibration valve assembly and begin operation of the sampling system. Operate the sampling system, recording the NO_x response, for at least 30 minutes. If the NO₂ to NO conversion is 100 percent, the instrument response will be stable at the highest peak value observed. If the response at the end of 30 minutes decreases more than 2.0 percent of the highest peak value, the system is not acceptable and corrections must be made before repeating the check.

5.6.2 Alternatively, the NO₂ to NO converter check described in Title 40, Part 86: Certification and Test Procedures for Heavy-duty Engines for 1979 and Later Model Years may be used. Other alternative procedures may be used with approval of the Administrator.

6. Emission Measurement Test Procedure

6.1 Preliminaries.

6.1.1 Selection of a Sampling Site. Select a sampling site as close as practical to the exhaust of the turbine. Turbine geometry, stack configuration, internal baffling, and point of introduction of dilution air will vary for different turbine designs. Thus, each of these factors must be given special consideration in order to obtain a representative sample. Whenever possible, the sampling site